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COLLEGE OF AGRICULTURE
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Part II

4-H Food Facts and Home Cookery

By
MARION M. HEPWORTH

COOPERATIVE EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS OF THE STATE OF IDAHO UNIVERSITY OF IDAHO EXTENSION DIVISION AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

BOYS' AND GIRLS' CLUBS

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Sportsman's Prayer

Dear Lord, in the battle that goes on through life
I ask but a field that is fair
A chance that is equal with all in the strife
A courage to strive and to dare.
And if I should win, let it be by the code,
With my faith and my honor held high,
And if I should lose, let me stand by the road
And cheer as the winners go by.

4-H Food Facts and Home Cookery

By
MARION HEPWORTH*

THIS is the second series of the Food Facts Bulletin. The Club members by now should be able to discuss and select foods for the family meal. This bulletin will deal more specifically with the use of the various meats and planning definite meal service economically and attractively.

For convenience some of the necessary factors of meal planning are repeated.

Club Requirements

Club members should:

1. Be bona fide 4-H club members—age requirement.
2. Attend club meetings.
3. Keep and submit record of work.
4. Make an exhibit.
5. Give one or more public demonstrations (Achievement Day, Fairs, etc.)
6. Have had at least two years in Club work; that is, one year in some project other than nutrition and shall have completed the first year's nutrition project.

The Club should arrange for:

1. Adult leaders.
2. Meeting place.
3. Regular meeting time.
4. Officers—President, Vice-President, Secretary and Treasurer, Club Reporter.
5. Club exhibit (either at Fair, Community meetings or in store windows).
6. Demonstration team to represent club.
7. Club camp or picnic.
8. Reports to district club agent.
9. Developing 4-H Club ideals.
10. Stimulating interest in home work through Club work.

Meetings

1. At least twelve regular meetings as in the first year series.
2. If desirable or possible to hold meetings more frequently, much work can be done in developing a skill in home practices and in preparation of food.
3. Records of each meeting should be kept. These are to be sent regularly to the club agent.

*State Home Demonstration Leader.

Keeping of Records

The leader should explain at the first meeting the necessary points in keeping the record book. Two suggestions are possible for the leader:

1. The record books may be given to all members after explanation is made by leader for keeping of records, or

2. The leader may keep record books and hand out at each meeting for each member to fill in.

Requirements for Completion of Project:

The requirements for the second-year nutrition project are given in this bulletin under Problems I. to XIII., including the home work.

Requirements for Exhibits:

(1) Record book and achievement story completed and placed on exhibit.

(2) Exhibit of one cake and one variation.

(3) Vitamin exhibit with colored picture of foods or the actual foods themselves.

(4) Choose one of the following phases as the fourth requirement for your exhibit:

(a) Prepare a chart showing suitable day's meal for a family of five (keeping in mind the Idaho foods and a reasonable cost).

(b) Prepare a meat chart, showing uses of various cuts of meat and methods of preparation.

(c) Prepare an exhibit of a table setting for a Mother's luncheon or for a Club party, with appropriate decorations; and list the menu for such a luncheon or party.

(d) Prepare an exhibit of canned foods to show the planning for a balanced meal. This should be exhibited with the menu.

Planning Balanced Meals for the Day

Foods are classified into four groups according to their use in the body:

a. *Building foods* — such as milk, cheese, eggs, lean meat, fish, nuts. These build and repair the cells of the body as muscle and bone cells.

b. *Energy foods*—such as starches, sugars, and fats. These give heat and energy and are necessary for our day's work.

c. *Regulating foods*—such as leafy vegetables, coarse cereals, fruits, and water. These keep the body in good running condition.

d. *Protective foods*—such as milk, butter, eggs, fruits, and vegetables. These prevent certain diseases and promote health and growth.

To be certain that each of these four necessary groups are included in your diet every day, use—

Milk—One-half to one quart daily.

Vegetables—Three servings daily, consisting of (a) a leafy vegetable, (b) a starchy vegetable, and (c) one other vegetable.

Fruits—Two servings daily. A raw fruit, a raw vegetable, or canned tomatoes daily.

GUIDE FOR MEAL PLANNING

Food Facts

Growth Promoting and Protective Foods					Body Building and Regulating Foods Muscle, Bone, Teeth and Regulating					Energy Giving Foods		
"A"	"B"	"C"	"D"	"G"	Protein	Lime or Calcium	Iron	Phos-phorus	Roughage	Starches	Sugar	Fats
Butter	Green vegetables	Citrus Fruit: Lemon Orange Grapefruit	Butter	Eggs	Whole or skim milk	Milk	Spinach	Milk	Green vegetables	Bread	Syrup	Butter
Cream	Tomatoes	Tomatoes	Egg yolk	Milk	Eggs	Cheese	Dried beans	Cheese	Beans	Macaroni	Honey	Cream
Whole milk	Whole grains	Raw Vegetables Cabbage Lettuce Onions Carrots Turnips	Whole milk	Liver	Cheese	Vegetables esp. leafy	Peas	Codfish	Cabbage	Rice	Sugar	Cheese
Cheese	Legumes	Cooked Vegetables Spinach String beans Carrots Potatoes	Green Vegetables	Kidneys	Lean meat	Carrots	Dates	Lean beef	Celery	Tapioca	Preserves	Lard
Egg yolk	Root vegetables	Other Fruits: Apples Bananas etc.	Liver	Lean meat	Fish	Cauliflower	Prunes	Oatmeal	Asparagus	Corn starch	Jellies	Bacon
Green Vegetables Spinach Lettuce String beans etc.	Nuts	Milk (some, when raw)	Cod liver oil	Legumes	Dried peas	Figs	Figs	Celery	Onions	Potatoes	Dried fruits	Salad oils
Yellow Vegetables Carrots Sweet Potatoes Squash	Fruits			Fruits, vegetables whole grains in smaller amounts	Cereals	Oranges	Raisins	Egg yolk	Prunes	Breakfast food	Candy	Chocolate
Tomatoes	Milk				Nuts	Rutabagas	Egg yolk	Spinach	Dates	Crackers	Cake	Salt pork
Liver, Heart and Kidney	Yeast			Yeast		Buttermilk	Red meat	Cauliflower	Bran		Cookies	Peanut butter
Cod liver oil						Cottage cheese	Molasses	Asparagus	Apples			
							Bran	Whole cereals	Turnips			

Eggs—One daily.

Meat—One serving daily.

Cereals—Whole grain cereals in breads and breakfast foods—at least two servings daily.

Water—Six to eight glasses daily.

Moderate amounts of sweets, fats, and other desirable foods.

Things to Consider in Planning Meals

1. Age and occupation of the members of the family.
2. Season of the year—more fats are used in winter than in summer menus.
3. Serve a food only one way at a meal. Mashed potatoes, candied yams and potato salad, should not be served at the same meal.
4. Serve hot things on hot dishes, and cold things on cold dishes.
5. Use foods in season in so far as possible.
6. In menus, combine crisp foods which will demand chewing with soft foods, and moist foods with dry ones.
7. Serve light desserts as fruits with a heavy meal and rich desserts as pie or short cake with a light meal.
8. Avoid too much fried food.
9. Serve left-overs different in some way from the original dish.
10. Serve foods as attractively as possible.

Things to consider when planning for the preparation and serving of any meal:

1. Plan the menu to meet the needs of the group.
2. Plan the order of work necessary for the preparation of the meal.
3. List things that can be done before-hand to save time and energy.
4. Know your stove and how to regulate it.
5. List supplies and utensils needed.
6. Plan for the serving of the meal.
7. Serve the meal on time.
8. Plan for clearing the table, washing dishes, and putting the kitchen in order.

Problem I

Vitamins

The general functions of vitamins are to promote:

General well-being:

Health of tissues
Appetite
Stamina
Vigor
Endurance
Nervous stability

Normal functioning of digestive tract.
Nutrition, especially utilization of mineral elements.
Resistance to bacteria.
Growth and reproduction.

The following summary, showing the effect of lack of vitamins, as taken from *Nutrition and Physical Fitness* by Bogart:

Vitamin A, lack damages epithelial tissues in:

1. Skin and glands.
2. Membranes covering eyes.
3. Membranes lining
   a. Respiratory tract.
   b. Digestive tract.
   c. Genito-urinary tract.

Vitamin B, lack damages nervous tissues and digestive tract.

Vitamin C, lack damages endothelial tissues in

1. Blood vessels.
2. Membranes about bones.
3. Certain tissues in teeth.

Vitamin D, lack damages skeletal tissues:

1. Bones.
2. Teeth.

Vitamin E, lack damages reproductive tissues.

Vitamin G, lack is associated with production of pellagra.

Problem II

Meats

THE following ill effects from low and high protein diets are taken from Dr. L. J. Bogart's *Nutrition and Fitness*:

Low Protein May Lead to:	High Protein May Result In:
Stunted growth	Stimulation of metabolism to disadvantageous growth
Functional nervous diseases	Intestinal putrefaction
Possible anemia	Strain on liver and kidneys
Lessened efficiency	Lessened health and vigor
Lessened reproductive ability	
Earlier senility	

Keeping these facts in mind, let us remember that meat should be a part of the day's meal plan for the low-cost meals, as well as for the more expensive meal. Meat has a flavor that makes the meal more satisfying. Meats owe their appetizing taste and their pleasing variety of flavor to the extractives they contain. These extractives are found in soups. They have a slightly stimulating effect on digestion and the appetite; for this reason they are excellent starters of any meal.

The lack of calcium and roughage in meat should be supplemented by milk, vegetables, and fruits. In other words, meat is a food to be used, but with other foods, not to the exclusion of other foods which supply the food elements that may be lacking in meat.

There is an erroneous idea that fat detracts from the quality of meat. Fat when mixed through the meat fiber adds greatly to its nutritive value, so that when buying or selecting meat the cuts that are marbled or interspersed with fat and lean are the best cuts to choose.

So we find proteins needed for:

1. Growth in childhood.
2. Reproduction.
3. Building after illness.
4. Upkeep of tissues already built.

Problem III

Lamb

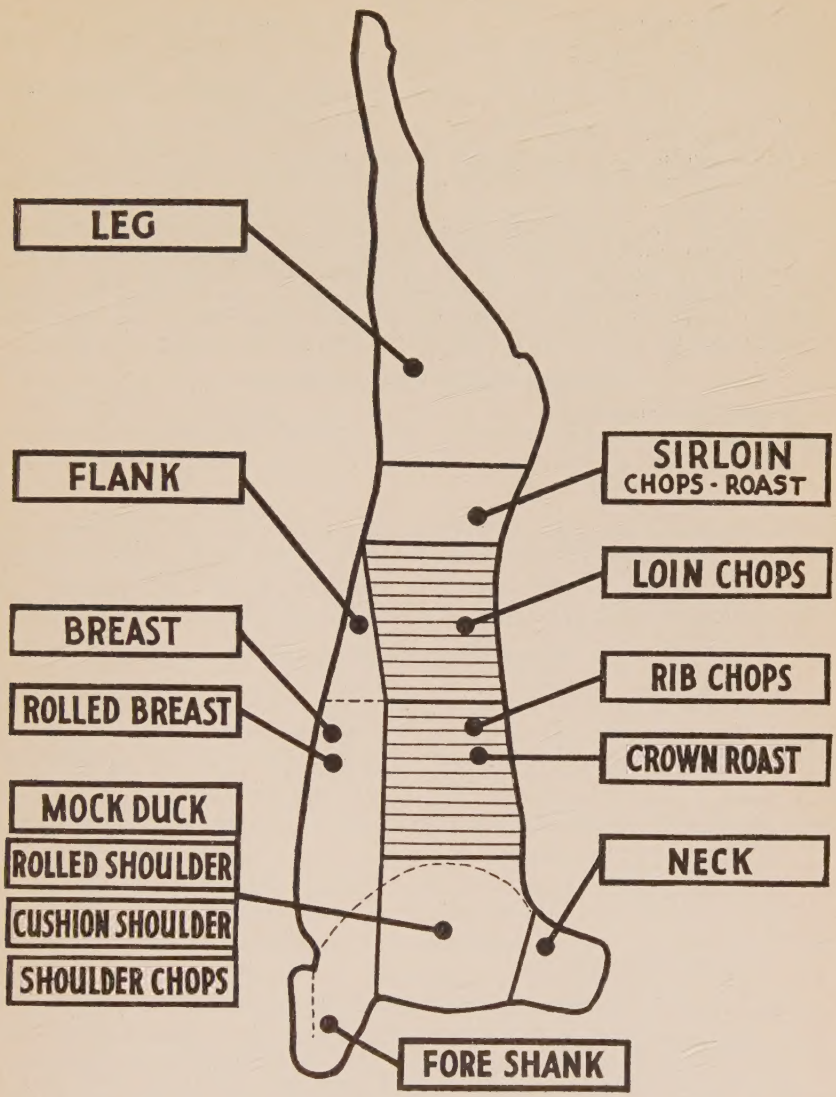
Lamb and Mutton as Foods. Lamb is in season in Idaho the entire year. Lamb is remarkably suited to use at any occasion and should be utilized as a food more completely than it has been. Lamb and mutton and other meat products are making a definite contribution to the economic life of Idaho and the Northwest. Those who do the planning of the family meal, and those who purchase the food supplies can add to the food value of the meals by using lamb frequently, and help add to the economic resources of the state by promoting a better utilization of the less-used cuts of lamb.

Food Value Important. The food value of lamb is an important factor to consider if it is to contribute to a well-balanced meal. Dr. H. C. Sherman in the *Chemistry of Food and Nutrition,* says: "Keep in mind the importance of a well-balanced knowledge of all four main factors of nutritive requirements—calories, protein, mineral elements, and vitamins."

Dr. Ella Woods of the Idaho Agricultural Experiment Station, says: "Every food so long as it is clean and wholesome can contribute something to the day's meal; our problem is to choose each so that it will supplement, rather than add to the other; each must be chosen with reason and each must play its part."

Lamb is:

1. A good source of iron.
2. High in phosphorus.
3. High in protein.
4. High in fat, the proportion varying with the cut.
5. High in vitamins A and B contained in the liver and kidneys.
6. Appetizing and has a "staying quality" necessary to the worker.
7. A balanced meal when supplemented by fruits, vegetables, and milk.
8. Completely and easily digested, palatable, good in flavor, and can be served with a large variety of vegetables and fruits.



CUTS OF LAMB

It is important to know the cuts and selections of lamb, and it is advisable to know certain by-roads that will improve some cuts.

By combining oil and vinegar, three parts vinegar to one part of oil and applying this mixture to the meat, any lean meat can be improved. This is particularly true of mutton. It helps to develop tenderness and flavor. This method may also be of aid in keeping small portions of meat from spoiling.

Lamb Stew

2 lb. lean raw meat
¼ c. onion (browned with lamb)
1 qt. water, flour, if desired
Salt and pepper
2 tb. butter or lard
8 or 10 medium uniform sized onions
8 or 10 medium uniform sized potatoes
12 medium sized carrots
Small cabbage cut in quarters with the core retained
Celery cut in lengths of from three to four inches
Green beans

Breast, shoulder, neck, flank, and trimmings all are good for lamb stew. Wipe the meat with a damp cloth, and roll in flour. Melt the butter, add the onion, cook until it turns yellow. When the meat and onions have browned delicately, put them in kettle, add the water, first pouring it into the skillet to get the browned fat. Cover and simmer for ¾ hour. Then add the whole onions, green pepper, carrots, celery. Continue to cook for one-half hour. Add cabbage and potatoes and finish cooking.

Potatoes Stuffed with Lamb Hash

3 c. chopped cooked lamb
6 medium-sized potatoes
3 medium-sized onions
1 c. chopped celery
3 tb. butter
3 tb. parsley
3 whole cloves
3 pepper corns
1 bay leaf
Salt and pepper

Chop onions, add celery, salt, and pepper. Brown in butter, add lamb and mix thoroughly with seasoning. Moisten with lamb stock. Wash potatoes well. Cut off bottom so it will be flat. Scoop out center into as large a hollow rectangle as possible without breaking. Fill the potatoes with lamb mixture, place in baking pan and bake in moderate oven until potatoes are done—30 minutes. Sprinkle with chopped parsley.

Rolled Shoulder of Lamb

The rolled shoulder of lamb is a convenient size for a roast. It will need to be skewered or sewed together to hold in shape. To prepare, wipe the meat with a damp cloth. Sprinkle the inside of the pocket with salt and pepper and pile the dressing in lightly, and sew the edges together. Rub the outside of the roll with salt, pepper, and flour. Place on a rack in an uncovered pan without water in a hot oven. Cook for thirty minutes. Reduce the temperature and finish cooking. It will require from two to three hours to roast. Roast Shoulder of Lamb may be stuffed with the following dressing:*

2 c. bread crumbs
½ c. sour apples chopped
¼ c. celery chopped
1 c. currants
¼ c. chopped cooked bacon
Salt and Pepper

*Any favorite recipe may be used instead of the one suggested, or this cut of lamb may be prepared without dressing.

Roast Loin of Lamb with Apples, Browned Potatoes, and String Beans

Wipe with damp cloth and season the meat with salt, pepper, and a little onion juice, place on a rack in a baking pan, and bake in a moderate oven for from one and one-half to two hours. An hour before serving time, core tart apples and arrange around the lamb. Pare medium-sized potatoes, place these around the lamb and cook for three-quarters of an hour. The last twenty minutes, add canned string beans and fill the apples with red jelly and finish cooking. Use some of the apples and some of the browned potatoes with lettuce leaves or parsley for garnish.

Baked Lamb Loaf

2 lb. lamb shoulder, ground
1 c. bread crumbs
1 onion, minced
1½ t. salt
½ green pepper, minced
1 egg
Pepper
1 c. stock or milk

Mix all ingredients thoroughly and shape into a loaf in a buttered baking dish. Place in a moderately hot oven (450° F.) and cook for 1½ hours.

Problem IV

Beef

A Better Use of Meat and Meat Products. There are several important factors that determine the quality and palatability of meat—tenderness and flavor are the consumer's measure of the quality of meat. Quoting from material prepared by the National Live Stock and Meat Board: "The flesh of beef should be bright, cherry red in color, velvety in appearance, firm yet pliable, and fine in grain, with a minimum of connective tissue. The fat should be flaky and creamy white; it should be evenly distributed over the exterior surface of the carcass, and in an even, though thinner, covering over the interior surface of the ribs. There also should be relatively heavy deposits of fat between the larger muscles, and a liberal distribution of fat along the connective tissues and between the muscle fibers. This latter characteristic is what gives to the cut surface the streaked appearance known as marbling. The bones should be porous and pinkish in color rather than flinty white, and as small as is consistent with the weight of the carcass."

Although meats are low in calcium they are sources of iron and phosphorus; and these minerals are important when planning the meals from the standpoint of health. Although the extractives of meat have little food value they are extremely important because they give flavor to meat and act as a stimulant to the flow of digestive juices. They are called extractives because they may be extracted by boiling water. This method is used in making soups, meat stocks, etc.

Different cuts of beef vary greatly in tenderness; therefore, it is necessary to cook each cut according to the method best adapted to bring out the best qualities of that cut.

The tender cuts which contain only small amounts of connective tissue are cooked best by dry heat; i.e., roasting, broiling, and pan-broiling.

The less-tender cuts are cooked by moist heat in order to soften the connective tissue and to make it tender. Such cuts are cooked by braising, stewing, and cooking in water.

Certain mechanical means are used also for the purpose of making meat tender. These are grinding, pounding, and marinating.

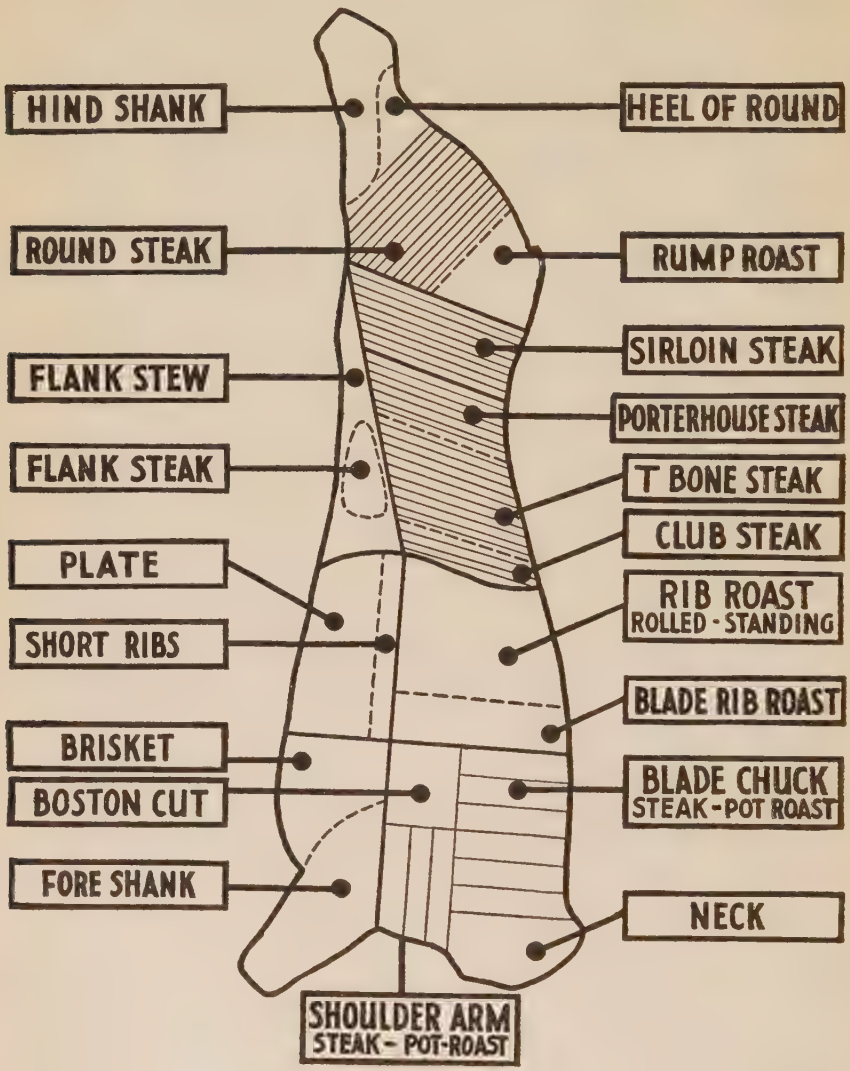
Grinding breaks the connective tissue, and the ground beef may then be cooked just as any tender cut.

Pounding breaks the connective tissue and shortens the fibers, especially if a meat "tenderer" is used. The cube steak is an example of how this method is used.

Marinating depends upon the softening action of the acid contained in the marinade. The German Sauerbraten is an example of the use of marinating.

The less tender beef cuts may be made tender by making them into pot roasts, "smothered" steak, or Swiss steak—in other words braising them—or by making them into one of the many kinds and variations of stews. Or grind the meat to divide the muscle fibers and connective tissue into tiny

bits, and then cook it as if it were tender meat—making broiled hamburg steak, or baked meat loaf, for example. Add fat as needed for satisfactory cooking.



CUTS OF BEEF

Pot Roast

Brown in pot four pounds beef, then add quart boiling water, two tb. vinegar, pt. canned tomatoes, two bay leaves, 1 c. chopped celery, two onions, quarter t. sage, cover tightly and simmer three hours, turning several times. Cook longer if not tender. One hour before it is done add 1 t. salt, two sliced carrots and three small onions. Add more water if needed during cooking; dish, skim out vegetables, place around meat. Thicken liquor with browned flour for gravy.

Standard Meat Loaf

1 lb. beef, ground
½ lb. pork sausage
¾ c. cooked cereal or
2 c. soft bread crumbs
1 c. milk
2 eggs
¼ c. sweet pickle, chopped
1 t. onion, chopped
1 t. salt
1 t. paprika

Combine ingredients in order given, and pack firmly in baking pan. Brown in hot oven (450° F.) for 15 minutes. Reduce heat, cover pan and bake in moderate oven (350° F.) for one hour longer. Occasionally prick the loaf with a fork to allow juices to be absorbed.

Veal may be substituted in this recipe for the pork sausage, and little link sausages laid on top of the loaf or put on end around the pan, being held in place by the loaf. This takes ¾ lb. link sausages. If the loaf is baked in a bread pan this allows two links to each. Six servings.

Browned Stew and Baking Powder Biscuits

1 jar canned meat
4 tb. flour
1 t. salt
Pepper
8 small carrots or
4 large, quartered
4 turnips, quartered
4 to 8 potatoes, quartered
8 small onions

Put the vegetables on to cook in boiling, salted water to which the liquor from the meat has been added. Meanwhile, roll the meat in flour and brown in hot fat. Add meat to the vegetables when they are nearly tender, rinsing out the pan in which the meat was browned. When vegetables are tender and the meat has heated through, lift the stew to a large platter, placing the meat in the center. Arrange hot baking powder biscuits over the top of the stew. Surround the meat with the vegetables, each group separately. Thicken the gravy and send to the table in a separate dish. Eight generous servings.

Beef and Vegetable Pie with Potato Crust

1½ lb. meat, rump or round
¼ c. flour
2 c. small peeled onions
1 c. peas
1 c. diced celery
2 c. diced carrots
Salt
2 tb. parsley

Wipe and cut meat in one inch cubes. Fry out a small piece of suet and add the meat which has been rolled in flour. Stir until meat has browned. Add water, cover and simmer until meat begins to become tender. Transfer to casserole, add vegetables and simmer 15 minutes longer. Cover with potato crust. Bake until crust is done, 20 minutes.

Potato Crust

2 c. flour)
½ t. salt)
2 t. baking powder)
½ c. shortening)
1 c. cold mashed potato)

Sift flour, salt, and baking powder
Cut in shortening and mashed potato.
Add milk enough for soft dough.
Put on a floured board and roll gently.

Problem V

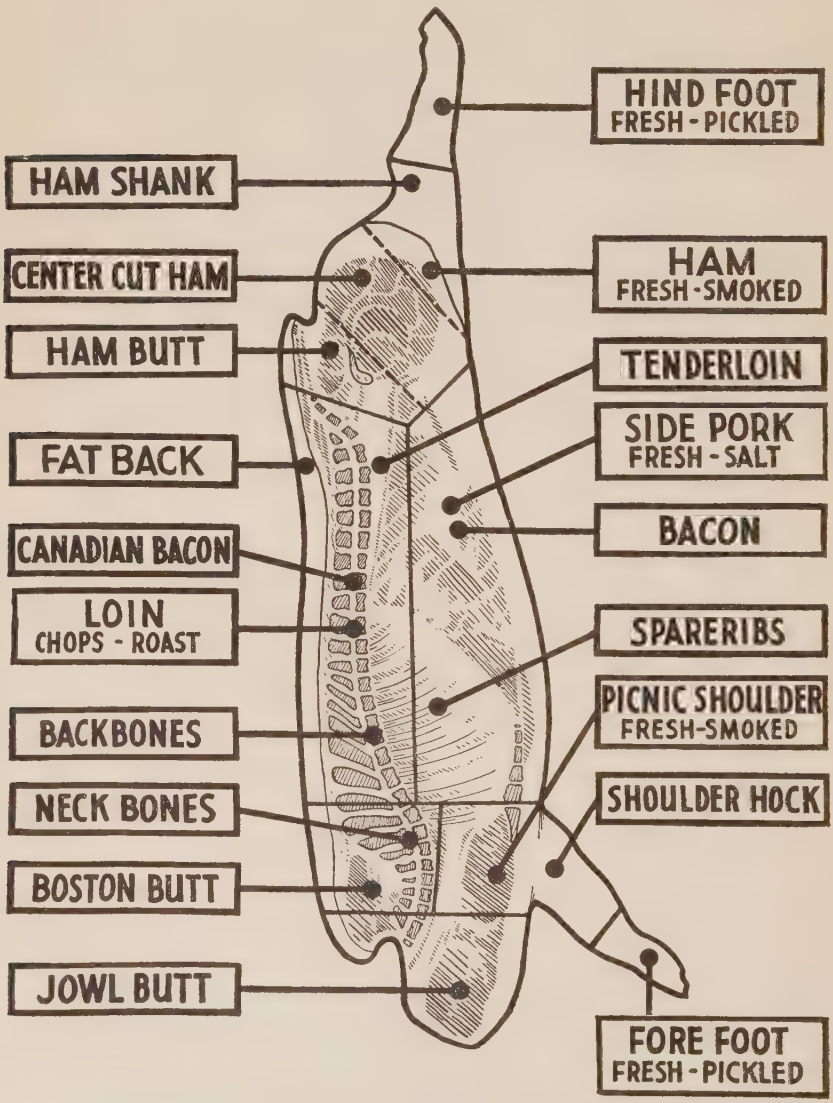
Pork

VITAMIN B is present in lean meat, especially in lean pork. Liver, heart, and kidneys are by-products of meat that should be completely used because they are high in food value. Dr. Hoagland says: "Meat may be regarded as an important source of Vitamin B in the diet—.

Pork in particular "That is, the lean meat is rich in this vitamin comparing favorably in this respect with liver and kidneys. Beef appears to

contain a smaller proportion of this vitamin, while mutton occupies an intermediate position. Some of the internal organs are particularly rich in vitamin B. The heart appears the richest in this vitamin, but liver and kidneys have only a slightly lower value. These by-products are an important and economical source of vitamin B."

Fresh pork shoulder makes another delicious boned roast with savory bread crumb stuffing. Then there are spare-ribs—a winter dish on the farm, but available in the city at any time of year. They are good baked, with or



CUTS OF PORK

without stuffing. Cooked with sauer-kraut or fresh cabbage, spare-ribs make a cheap and appetizing dish as long as the weather is cool.

All cuts of pork are tender, so all chunky cuts may be cooked by roasting. This is true either of fresh or cured cuts of pork. Slow cooking is the best method with pork as with other types of meat. Pork should always be cooked to the well-done stage. The flavor of pork is developed by thorough cooking.

Baked Pork Chops

Select one chop for each person to be served. Flour and brown well on both sides in frying pan. Arrange on bottom of baking dish and salt. On each chop place a large slice of onion, and three tablespoons of cooked tomato. Bake without cover for 1 hour in medium oven.

Pork and Vegetable Casserole

1 lb. lean fresh pork
2 tb. flour
3 potatoes
5 carrots
5 onions
1 c. water or tomatoes

Use sliced fresh ham or shoulder, or any lean pork. Cut into small pieces; fry until brown, dredge with flour and allow flour to brown slightly. Add enough water to make a thick gravy, about 1¼ cups. Slice vegetables thinly and arrange in layers with meat and gravy. Pour tomatoes or water over the top. Cover and cook in a moderate oven 1 hour with the cover on, then remove cover and cook 15 to 20 minutes longer. When cover is removed a cup of peas may be added.

Ham Loaf

1½ lb. ground smoked ham
1½ lb. ground fresh pork
1 c. bread or cracker crumbs
½ t. salt
½ tb. onion juice
Milk or tomato juice to moisten
2 eggs beaten slightly

Mix well, shape into loaf and bake in moderate oven (375° F.) for 2 to 2½ hours.

Creamed Ham

3 tb. butter or other fat
4½ tb. flour
3 c. milk
3 c. ground cooked ham
Salt
Pepper

Make a white sauce of the fat, flour, and milk. Add the ham and green pepper and cook the mixture about 10 minutes. Season to taste with salt and pepper. Serve hot on toast, or with noodles.

Sausage, Cabbage, and Apples En Casserole

Make the sausage into flat cakes and fry until crisp on both sides. Put a layer of shredded raw cabbage into a lightly greased baking dish, and add a layer of sliced apples, another of cabbage, etc. Salt each layer as it is put on, and have apples as the top layer. Lay the cakes of fried sausage over the top. Wash out the sausage pan with 1 tb. vinegar and pour over the contents of the baking dish. Cover and cook until the cabbage and apples are tender. Serve from the dish in which cooked.

Baked Apples Stuffed with Sausage

1 lb. pork sausage
6 cooking apples
1 c. sugar

Pare the apples and remove the centers. Stuff with pork sausage. Place in a baking dish. Sprinkle with sugar. Add 1 c. water, cover, and bake in a moderate oven (350° F.) until apples are tender.

Baked Ham in Milk

Put slice of ham 1 or 2 inches thick in a covered baking dish. Cover with milk and bake in a moderate oven until done (about 45 minutes). Remove cover the last 10 minutes so as to brown the meat. The ham may be baked with a little brown sugar sprinkled over the top and without adding any liquid. To keep the milk from curdling, 2 tb. flour and 1 t. dry mustard may be rubbed over the ham.

Problem VI

Liver

THE liver and certain other organs, such as the heart and kidneys, are valuable from a nutritive standpoint. In addition, they are usually cheap, as emphasized previously. It is not necessary to get calf liver in order to have a good nutritive food. The liver of pork or lamb is equally good. The Bureau of Home Economics in *The Market Basket* says:

"Liver may be either a cheap food or a luxury. That depends upon the kind you buy. Cheap or expensive, it is a very nutritious food. Pork liver has much the same food values as calf liver. So have beef liver and lamb liver, both of which are, as a rule, cheaper than calves' liver.

"Liver is a unique food. It is especially rich in iron and copper, which are needed for the building of red blood corpuscles. It is one of the richest sources of vitamin A, is a good source of vitamin G, and contains some vitamin B. Like other meats, it has a high percentage of protein. In recent years science has discovered that liver has specific value in certain types of anemia.

"Liver is an excellent food for children," say the nutrition specialists. "Therefore, when fowls of any kind are on the family bill-of-fare, let the children have the livers. Liver makes a good sandwich filling, too, for the school lunch box."

Because liver is such an excellent food and cheap and readily available, it should be used in a variety of ways. Liver and Bacon, Liver and Onions, Liver and Milk Gravy, Pork Liver Loaf, Scalloped Liver and Ham on Toast, Liver Paste, Braised Liver and Tomatoes, are varying ways in which this product may be put to a good use. In combining liver with some of the winter vegetables, such as cabbage, carrots, turnips, potatoes, onions, and canned tomatoes, we have begun to build a meal suited to the whole family. The addition of milk, butter, and cereals makes an excellent low-cost, but nutritious meal.

Scalloped Liver and Potatoes

1 lb. liver, sliced thin or chopped
1 qt. thinly sliced raw potatoes
Salt
Pepper
2 tb. bacon fat
1 small onion, chopped
1½ c. milk
Flour

Salt and flour the liver and brown lightly in the bacon fat. Put the potatoes and liver in alternate layers in a greased baking dish, with potatoes on the top and bottom. Add salt and pepper to season the potatoes. Pour on the milk, cover and bake for 1 hour in a moderate oven, or until the potatoes are tender. Toward the last remove the cover and allow the potatoes to brown on top.

Liver Baked with Vegetables

2 lb. liver, in one piece
1 large onion, sliced
1 tb. drippings
2 c. stewed tomatoes
½ c. hot water
12 small potatoes
¼ c. flour
2 c. diced celery
3 slices bacon
1 t. salt
⅛ t. pepper

Melt drippings, add onion and celery, and cook until slightly browned. Pour into casserole. Dredge liver with part of flour, add to drippings, brown, then add the hot water. Cover and cook ½ hour. Add potatoes which have been peeled and cut in half. Cover potatoes with bacon. Re-cover the dish, and bake until potatoes are done. Remove lid and brown bacon. Remove the meat and vegetables. Add tomato juice, thicken sauce with flour, and serve over liver.

Lamb Liver Smothered with Onions

Wash in cold water. Roll in seasoned meal. Fry until half done. Cover with sliced onions, seasoned. Add one cup of milk and finish cooking over a low fire or a slow oven.

Poultry Recipes

Chicken Fricassee

Cut young chicken in pieces for serving. Roll in seasoned flour. Brown in hot fat; cover with boiling water; add 1½ t. salt. Simmer until tender. Remove the meat to a hot serving platter; boil the stock rapidly until it has been reduced to 1½ or 2 cups; add ½ c. cream; stir in 2 tb. flour which has been mixed to a paste with milk or water; boil 5 minutes stirring constantly; season.

Pour the gravy over the chicken; arrange baking powder biscuits in a border around the edge of the platter.

Chicken Loaf

2 c. finely cut cooked chicken
1 c. fine bread crumbs
1½ tb. butter or chicken fat
½ c. milk
2 eggs
½ c. mashed, canned, or cooked peas
Salt
1 tb. each chopped onion and green pepper

Cook onions and green pepper in fat. Heat milk and moisten crumbs with it. Combine all ingredients, adding the beaten eggs last. Place the mixture in a greased baking dish or a loaf pan and bake in a moderate oven (375° F.) for about an hour or until firm and brown. Turn out on a platter. The loaf may be served hot or cold. If served cold, garnish with sliced tomato.

Scalloped Chicken

Remove cooked chicken from bones, cut into dice, or break into large flakes with fork. Grease a baking dish. Put in layer of chicken, cover with bread crumbs, dot with butter and season with salt and pepper. Continue adding layers until dish is filled. Pour on milk to partially cover. Put buttered crumbs on top and bake in moderate oven (350° to 375° F.) for about ½ hour.

Problem VII

Preparation for Cookery

Success in cookery depends upon following directions accurately: accuracy is an element of good club work.

1. Study information given in bulletin.
2. Read and follow directions in recipes used.
3. Work with clean hands.
4. Wear a head band to confine the hair.
5. Get together all utensils and all materials to be used.
6. All measurements are level.
7. If pans are to be greased, grease and have ready for use.
8. Be sure the oven temperature will be right when needed.
9. Sift flour before measuring.
10. Sift sugar, if lumpy, and do not pack.

Table of Abbreviations and Equivalents

3 teaspoons (t.) equal.....1 tablespoon (tb.)
16 tablespoons (tb.) equal.....1 cup (c.)
2 cups (c.) equal.....1 pint (pt.)
2 cups (c.) butter equal.....1 pound (lb.)
4 cups (c.) flour equal.....1 pound (lb.)
2 cups (c.) granulated sugar equal.....1 pound (lb.)
2 tablespoons (tb.) butter equal.....1 ounce (oz.)
2 tablespoons (tb.) liquid equal.....1 ounce (oz.)
4 tablespoons (tb.) flour equal.....1 ounce (oz.)

OVEN TEMPERATURES

Classification of Oven Temperatures

(Taken from Bulletin 22, Teachers' College, Columbia University)

Slow	Moderate	Hot	Very Hot
(250°-350° F.)	(350°-400° F.)	(400°-450° F.)	(450°-550° F.)
Custards Meringues Sponge Cake Angel food cake	Bread Gingerbread Plain cake Cookies	Popovers Parker House rolls Baking Powder biscuits	Pastry

General Equipment Needed in Cooking

1 measuring cup
1 tablespoon
2 teaspoons
1 mixing spoon
1 flour sifter
1 paring knife
1 vegetable pan
1 spatula
1 bowl to use for dry ingredients
1 egg beater and bowl
1 baking pan
1 mixing board
1 rolling pin

Some recipes may call for other equipment that should be assembled before starting to work.

Combining Ingredients

Explanation of Terms Used

Stirring—used for mixing the dry ingredients and the liquid; consists of a circular motion.

Beating—used to smooth mixture after stirring and also to incorporate air.

Folding—used for mixing beaten eggs with liquid or batter.

Problems VIII and IX

Bread

BREAD may be made by two processes, depending on the time; i.e., Short Process and Long Process or Overnight Sponge.

The Short Process: Either liquid or compressed yeast is used because the yeast is in an active state. This hurries the process. All the flour is added at time of mixing; a stiff dough is the result and this is allowed to double in bulk. It is then made into loaves and set to double in bulk again.

The temperature must be kept even and from 3 to 5 hours should complete the process.

The Long Process: Dry yeast is used and has to be given time to develop. A thinner sponge is used because the yeast does not grow so well in a stiff dough. With this process the sponge usually stands overnight and the rest of the flour is added the next morning. The rest of the method is the same as for the short process.

Kneading

Use the lower part of the palm; with each push of the palm turn the dough and fold over. The dough should be smooth and elastic. It will be spongy to the touch and air bubbles will appear beneath the surface.

Stretch the underside when making the loaf and shape the dough with the hand. Make an oblong loaf. Have a smooth surface. The corners will fill out when the loaf rises.

Baking

The size of the loaf will depend on the size of the family, oven space, etc. If baking for exhibit for fairs, use a single loaf. If the oven space and time allow, the single loaf is to be preferred because it insures a more evenly shaped and baked loaf.

If a number of loaves are baked at one time, it may be necessary to turn the pan occasionally so that all loaves will be evenly baked.

The bread should begin to brown in 15 minutes, when the temperature is reduced; 380° to 400° F. is the correct temperature.

Many will not have an oven thermometer and in this case the following test may help—a piece of white unglazed paper placed in the oven. If it becomes golden brown in 5 minutes, the temperature is right.

To Test Bread

To determine when bread is baked:

(1) The loaf shrinks from the sides of the pan;

(2) Remove from pan and press the sides and if they rebound, it is done.

To Care for Bread

When bread is removed from the oven, it should be placed on wire racks to cool so that the air may pass all around it. When cold, store in receptacles

which have been thoroughly washed and scalded. The bread should not be wrapped. To freshen stale bread, moisten the loaf, place in a hot oven and the moisture will be driven in, making a moist crumb and a crisp crust.

Yeast Bread

(Short Process)

1 c. liquid (water, milk, or both)
2 t. sugar
1 t. salt
1 t. shortening
½ cake compressed yeast
About 4 c. flour

(This makes one loaf of bread)

PROCEDURE	REASON
Boil water or scald milk.	Kills any harmful bacteria.
Put sugar, salt and shortening in mixing bowl and pour scalded liquid over them.	Best way to dissolve sugar and salt and melt shortening.
Let stand until lukewarm.	Too high temperature will kill yeast.
Soften yeast in lukewarm liquid and add to rest of mixture.	Softening the yeast insures more even mixture.
Gradually add flour until it is stiff enough to handle on mixing board.	This part of method will take practice to determine the exact amount of flour needed. Remember that different flours vary in absorbing qualities.
Sift small amount of flour on clean dry mixing board.	Prevents sticking. Do not use too much flour.
Turn dough on to mixing board and knead until elastic and does not stick to hands and board.	Probably ten minutes will be necessary to thoroughly mix. This part of the procedure gives a smooth, even texture and makes bread elastic.
Put loaf in greased pan and let double in bulk.	Lighter loaf is the result when yeast is given time to develop.
Keep loaves covered while rising.	Prevents crust forming on dough
Bake in moderate oven about 45 minutes.	
Remove and place on rack to cool.	Rack allows air to circulate on all sides and bread does not become steamed.

Yeast Bread

(Long Process)

1 c. liquid
2 t. sugar
1 t. salt
¼ cake dry yeast
1 t. shortening
About 4 c. flour

PROCEDURE	REASON
Add ¼ t. sugar to ¼ c. lukewarm water. Soak yeast in this for 20 minutes.	Dry yeast is not active.
Scald rest of liquid and add to sugar and salt and shortening. Let cool until lukewarm. Then add softened yeast cake.	Easy way to melt shortening and dissolve salt and sugar. Necessary to cool to lukewarm so as not to destroy yeast.
Add about half of the flour or enough to make batter.	Yeast develops better in thin dough. Beating incorporates air and helps yeast to grow.
Cover and let stand over-night in warm place. Add balance of flour in morning.	Standing over-night gives yeast time for growth.
Shape into loaves. Allow to double in bulk and bake.	Same as above process.

Variations

Graham Bread

2 c. liquid, milk or water
½ to 1 yeast cake, or
½ to 1 c. liquid yeast
2 tb. shortening
2 t. salt
2 tb. sugar
3 c. graham flour
3 c. white flour

Butterscotch Bread

Roll out dough to fit in square tin one-half inch thick. Cover, let rise. Brush over with melted butter and at two-inch intervals make parallel rows of three-fourths inch depressions, using forefinger. In depressions thus made, put a bit of butter and fill with brown sugar. Sprinkle with 2 tb. brown sugar mixed with one t. cinnamon and bake in a moderate oven 35 minutes. (380° F.)

Cocoa Bread

1 cake compressed yeast
2 c. milk scalded and cooled
1 tb. sugar
5½ c. sifted flour
½ c. sugar
½ c. cocoa
½ c. butter
2 eggs
½ t. salt

Dissolve yeast and 1 tb. sugar in lukewarm milk, add 3 c. flour. Beat until smooth. Cover and set to rise about 1½ hours. Then add butter and sugar creamed, eggs well beaten, cocoa, rest of flour (or enough to make soft dough), salt. Knead lightly and put in bowl to rise until double in bulk. Mold in loaves, let rise. Bake 45 minutes. Nuts may be added.

Rolls

Follow directions as for bread. Knead quickly and lightly. Shape into rolls and put into pan for 2d rising. Let double in size. (Keep covered while rising and keep in warm—not hot—place). Bake.

Parker House Rolls

2 c. scalded milk
3 c. flour
3 tb. butter
2 tb. sugar
2 t. salt
1 yeast cake dissolved in ¼ c. lukewarm water, or 1 c. liquid yeast
Flour to stiffen sufficiently to knead

Add butter, sugar and salt to milk; when lukewarm add dissolved yeast cake or liquid yeast and three cups of flour. Beat thoroughly, cover and let rise until light; cut down and add enough flour to knead (it will take about 2½ cups). Let rise again, toss on slightly floured board, knead, pat and roll out to one-third-inch thickness. Shape with a biscuit cutter, first dipped in flour. Dip the handle of a knife in flour and with it make a crease through the middle of each piece. Brush over one-half of each piece with melted butter, fold and press the edges together. Place in a greased pan one inch apart, cover, let rise and bake in a hot oven twelve or fifteen minutes. As rolls rise they will part slightly and if hastened in rising are likely to lose their shape.

Cinnamon Rolls

Use the recipe given for Parker House Rolls. Roll the dough to one-third of an inch in thickness. Spread with a mixture of butter, sugar, and cinnamon. Roll as a jelly roll, cut into one-half inch slices. Place in a well-oiled pan, let rise to twice the original size, bake in a quick oven 15 to 20 minutes.

Problem X

SUGGESTED SCORE CARD

BREAD

	Standard	Tests	Common Defects	Causes
Appearance	1. Good shape. 2. Evenly rounded on top. 3. Smooth unbroken crust. 4. No bulges. 5. Uniform golden brown color. 6. Light shredded appearance just above pan.		1. Poor shape. 2. Broken crusts. 3. Bulges. 4. Not uniform color-burned or too light brown. 5. Grey.	1. Inexperience in molding loaf. 2. Cooled too fast. 3. Too much dough per pan, too long rising. 4. Over-fermentation, too hot oven, too slow baking. 5. Did not spring to maximum size in oven.
Crust	1. Even thickness. 2. ⅛-inch deep. 3. Crisp and tender.	1. Cut the loaf.	1. Too thick crust. 2. Hard and tough.	1. Heat too dry, oven too moist. 2. Too slow baking. 3. Did not use shortening.
Color of crumb	1. Creamy white.	1. Look across the cut loaf having light from angle on loaf.	1. Yellow or grayish. 2. Streaked. 3. Dark patches. 4. Dark—poor color.	1. Did not use standard flour. 2. Poorly mixed. 3. Worked in raw flour after fermenting dough. 4. Over-fermentation. 5. Under-fermentation 6. Old stale yeast. 7. Too cool an oven. 8. Too low temperature while rising.
Texture	1. Fine and even.	1. Cut a thin slice of bread. Hold up to light to see cell structure	1. Coarse and uneven cells. 2. Large round cells.	1. Over-fermentation. 2. Too cool oven at first. 3. Not enough flour. 4. Too large pan for amount of dough. 5. Too long rising in pans.
Elasticity and lightness	1. Slightly moist, not dry. 2. Elastic.	1. Press firmly between hands, if springs back quickly to original shape.	1. Heavy. 2. Crumbly. 3. Dry. 4. Sticky.	1. Did not use standard flour. 2. Too stiff dough. 3. Too cool oven. 4. Insufficient rising. 5. Stale yeast. 6. Not enough yeast. 7. Baked too long.
Flavor	1. Natural sweet nutty flavor of baked grain.	1. Taste it.	1. Sour. 2. Unpleasant odor.	1. Poor yeast. 2. Too long rising. 3. Too high temperature while rising over 80° F. 4. Too slow baking. 5. Incomplete baking. 6. Poor flour.

Problem XI

Cookies with Variations

Cookies

Basic Recipe:

1¾ c. flour
2 t. baking powder
½ t. salt
½ c. butter
1 c. sugar
1 egg
2 tbs. milk or cream
½ t. vanilla

Sift together dry ingredients, except sugar. Have butter warm enough to cream. Cream with sugar gradually until light and fluffy. Add the egg, milk, and vanilla. Beat thoroughly. Add the dry ingredients which have been sifted together. Mix well. Chill. Roll ⅛-inch thick and cut out with cookie cutter.

Nut Cookies

Use basic recipe. Add ½ cup chopped nut meats.

Raisin Cookies

Use basic recipe. Add ½ cup chopped seeded raisins.

Sour Milk Sugar Cookies

Use basic recipe. Omit sweet milk and baking powder. Add ½ cup sour milk and ½ teaspoon soda. Add more flour if needed.

Butterscotch Cookies

Use basic recipe. Use brown sugar instead of white sugar. Add ¼ cup chopped black walnut meats.

Chocolate Cookies

Use basic recipe. Divide mixture into fourths. To one portion add 1 square Baker's unsweetened chocolate melted and mix well. Spread in greased pan. Cover with following topping:

2 tbs. brown sugar
1 tb. melted butter
3 tbs. finely chopped walnut meats

Bake in moderate oven 15-20 minutes or until done. Cool in pan. Cut into strips 4"x1".

Spiced Cookies

Use basic recipe. Use one-fourth mixture. Combine 1 tablespoon molasses, 1 teaspoon cinnamon, ¼ cup raisins. Add to cookie mixture and blend. Spread in greased tins. Bake in moderate oven 15-20 minutes or until done. Cool in pan. Cut in strips 4"x1".

Coconut Cookies

Use basic recipe. To one-fourth mixture add ¼ cup shredded coconut. Mix well. Spread in greased pan. Sprinkle with coconut. Bake in moderate oven 15-20 minutes. Cut in strips 4"x1".

Layer Cookies

Use basic recipe. Spread on buttered tin. Beat one egg white, add 1 cup brown sugar, ½ teaspoon vanilla, and spread over the mixture. Sprinkle ¾ cup chopped English walnut meats over this and press lightly. Bake 30 minutes in moderately slow oven. Cut in squares or strips.

Refrigerator Cookies

Any cookie mixture firm enough to roll may be shaped into a long roll or several small ones, wrapped in waxed paper and kept in the refrigerator until needed. A few cookies may be sliced off with a sharp thin knife as wanted. The same foundation or basic recipe may be varied by adding melted chocolate or coloring, or nuts.

Pinwheel Cookies

1½ c. sifted flour
½ t. baking powder
⅛ t. salt
½ c. butter or lard
½ c. sugar
1 egg yolk, unbeaten
3 tbs. milk
1 square Baker's unsweetened chocolate, melted

Sift the flour and measure. Add dry ingredients except sugar and sift again. Cream butter thoroughly. Add sugar gradually and cream together until light and fluffy. Add egg yolk and beat well. Add the milk and then the dry ingredients. Divide dough into two portions. To one portion add chocolate and blend well. Chill until firm enough to roll. Roll each half into rectangular sheet ⅛-inch thick, and place plain sheet over chocolate sheet. Roll as for jelly roll. Chill over night or until firm enough to slice. Cut in ⅛-inch slices. Bake on ungreased baking sheet in hot oven 400° F. for 5 minutes or until done. Makes about 3½ dozen cookies.

Problem XII

Simple Desserts

Two-Egg Cake

2¼ c. sifted flour
2¼ t. baking powder
¼ t. salt
½ c. butter or other shortening
1 c. sugar
2 eggs, well beaten
¾ c. milk
1 t. vanilla

Sift flour once, measure, add baking powder and salt, and sift together two times. Cream butter thoroughly, add sugar gradually, and cream together until light and fluffy. Add eggs and beat well. Add dry ingredients alternately with milk, a small amount at a time. Beat after each addition until smooth. Add vanilla. Bake in two greased 9-inch layer pans in moderate oven (375° F.) 25 minutes.

May also be baked in greased pan 8x8x2 inches, in moderate oven (350° F.) 50 minutes.

Variations:

Chocolate Cake

Follow recipe making these changes:

a. Decrease baking powder to two teaspoons.
b. Add ½ t. of soda to dry ingredients.
c. Blend three squares unsweetened chocolate melted into shortening, sugar and egg mixture.
d. Increase milk by two tablespoons.
e. Pour batter into greased layer cake tins and bake 30 minutes.

Nut Cake

Follow cake recipe. Add 1 c. chopped nuts to shortening, sugar and egg mixture. Mix well. Bake in loaf cake pan.

Spice Cake

Follow cake recipe using ½ the given quantity and add ½ t. cinnamon, ⅛ t. cloves, ⅛ t. nutmeg to dry ingredients. Bake as cup cakes.

Currant Spice Cake

Steam ½ c. currants. Dry thoroughly. Add to shortening, sugar and egg mixture. Bake as cup cakes.

Cup Cakes

Plain:

Follow recipe, using ½ quantity. Fill greased cup cake tins not more than two-thirds full. Bake in hot oven 20 minutes. (Makes 12 cup cakes).

To vary cup cakes:

a. Add ½ c. dried fruit, chopped fine, to mixture.
b. Add ½ c. nuts, chopped, to mixture.

Brown Sugar Frosting

1½ c. brown sugar, firmly packed
½ c. granulated sugar
1 c. milk
1 tb. butter

Boil sugars and milk until a small amount of syrup forms a very soft ball in cold water (232° F.) Add butter and remove from fire. Cool to lukewarm (110° F.). Beat until thick and creamy and of right consistency to spread. If desired place over hot water to keep soft while spreading. Makes enough frosting to cover tops of two 9-inch layers. Cool this frosting before you begin to beat it. Caramel frosting beaten before it is cooled is almost invariably grainy.

Baked Apple with Honey Topping

Select medium size, uniform shaped apples suitable for baking purposes. Wash and core. Place in a baking pan, add sugar and water, and bake until done. Serve with honey topping.

Honey Topping

1 egg white
4 tb. water
1 c. honey
½ t. cream of tartar
Pinch salt

Combine all ingredients and cook very slowly in a double boiler over low heat. Beat constantly with a rotary egg beater until the mixture stands up in peaks. This may be beaten until creamy when removed from the heat. This is a delicious meringue topping. It does not set on the outside but is creamy and fluffy.

Whole Baked Pears

Wash, pare, and core pears. Place in a deep baking dish. Fill centers with coarsely cut nut meats. Sprinkle generously with light brown sugar. Dust with cinnamon. Add water, bake in a slow oven until tender.

Prune Brown Betty

2 c. soft bread crumbs
3 tb. fat
½ t. cinnamon
½ t. nutmeg
2 c. diced cooked prunes
¾ c. prune juice (varies with dryness of bread crumbs)

Melt the fat and stir into bread crumbs. Place a layer of crumbs in a greased baking dish, then a layer of prunes. Sprinkle with sugar and spices. Repeat the layers until the ingredients are used. Crumbs should be the last layer. Pour prune juice over the mixture. Bake in a moderate oven 30 minutes. Keep dish covered during the first part of cooking, then remove the cover to brown the crumbs. Serve with a nutmeg sauce or with cream and sugar.

Nutmeg Sauce

1 c. milk
1 tb. sugar
⅛ t. nutmeg

Combine the sugar, nutmeg and milk. Stir until the sugar is dissolved. Cinnamon may be substituted for nutmeg if desired.

Golden Pudding

1½ tb. butter
1 egg
¼ c. raisins
½ c. bread crumbs
¼ c. sugar
2 c. shredded carrots
1 tb. grated orange peel
¾ t. baking powder
½ t. salt

Cream the butter and sugar and add the beaten egg, grated carrots, raisins, and orange peel. Mix the crumbs and baking powder and salt and add to the first mixture. Pour into a buttered dish and bake at a moderate temperature for 45 minutes.

Graham-Cracker Ice Cream

½ c. sugar
1 pt. coffee cream
1 t. vanilla
1 c. graham cracker crumbs

Combine ingredients and freeze in the tray of an automatic refrigerator. When partially frozen, remove to a chilled mixing bowl and beat with a rotary beater until smooth and fluffy. Continue freezing without stirring. Serves 6.

Problem XIII

Meal Planning

Dr. H. C. Sherman and Dr. Mary Swartz Rose say:

"There are four main points to keep in mind. In planning the family meals which take into consideration the adult, the adolescent and the child, the four points are:

1. There must be enough food to meet all energy needs of the body.
2. There must be enough protein to build protein of the body and they must be of the right kind.
3. There must be enough of the necessary minerals.
4. There must be enough of all the necessary vitamins.

"In addition, there must be enough roughage to insure proper elimination. In this, good habits, plenty of exercise and plenty of the right food play a part. If the diet contains a large supply of vegetables and fruits, include some raw ones daily, and if some at least of bread and cereals are whole grain, there should be no need for worry about roughage, at least for children.

Quoting further, they say: "To go on with the four points in order:

1. The energy needs of the body have been exactly determined in calories and any mother who is interested in figuring them out can do so with the aid of government pamphlets.
2. Because protein helps to build new tissue and adolescent children are growing rapidly, they need a greater proportion of it in the diet than the adults.
3. A good many minerals have been found in the human body. Probably all are needed. In some way or other, only three need to be given definite attention; calcium, phosphorus, and iron. Iodine might be considered a fourth in inland diets from the sea.

"*Iron* or iron and copper, since the first seems to be useless without the second, is vitally necessary but again it is something that need not be worried about. A diet including such foods as peas, beans, whole grains, eggs, beef, fish, tomatoes, spinach, should meet the iron and copper needs of the adolescent boy or girl.

"In contrast with iron, the body needs larger amounts of calcium and phosphorus which build bone and teeth.

"It was found on the average that the body kept all the calcium that it could get up to a gram a day. Beyond that the body eliminated it as a waste product.

"It was also found that a quart of milk, which contains a small portion over a gram, provided sufficiently for calcium. *But*, with a pint of milk a day and getting the balance of calcium from vegetables, etc., did not insure a sufficient supply, it was found, however, that those that were given the quart of milk kept the gram of calcium inside them somewhere where all of it was used, but those that were fed the vegetables to make up the shortage of milk did not keep a sufficient supply. This is one reason why a quart

of milk is urged. *In the body, calcium is always used in combination with phosphorus.* In a good varied diet enough phosphorus will be obtained from a quart of milk products, the whole grains, cereals, vegetables, meat, and eggs."

Whether the income is limited or not, certain foods should be included to help maintain health. In this list will be included:

Dairy Products—Milk, butter, and cheese
Cereals—both bread and breakfast cereals
Eggs
Vegetables—fresh, canned, or stored
Fruits—fresh, canned, or stored
Meats
Sugars
Fats

We should think in terms of growth and development and the maintenance of health and vigor. Know food needs and what foods will offer the most in a program of health.

Dr. E. V. McCollum of Johns Hopkins University says: "You won't do any good by keeping them alive on a diet that inevitably brings them to a woeful state of health, and that's bound to come unless diets are balanced."

A safe way of providing enough mineral elements is to include in each day's meals liberal quantities of *one* or *two* foods, especially rich in them. For example:

Calcium	**Phosphorus**	**Iron**	**Iodine**
Milk	Cheese	Egg yolk	Sea food
Cheese	Egg yolk	Leafy vegetable	Vegetables
Vegetables, especially leafy	Milk	Meat, especially liver	Grains (from non-goiterous sections)
Egg yolk	Meat	Whole grains	
	Whole grains		

Outline for Cake Demonstration

Have cake prepared from basic recipe.
Prepare Nut Cake:

First Speaker — *Second Speaker*

Introduction of team by one speaker.

Sift ingredients, give reasons for sifting
Place before second speaker
Look at oven.
Grease tin
Explain variations of basic recipe

Prepare basic recipe: cream butter and sugar, add nuts, add eggs, etc. Give reasons
Mix ingredients and put in tin
Mention using beet sugar and why
Mention using butter and why

First Speaker

Mix cup cakes with ingredients already assembled.
Divide mixture, prepare half and put in pans already greased.

Second Speaker

Take half of cup cake mixture, prepare and put in pans.

First Speaker

Give varieties possible in basic recipe.

First Speaker

Summarize demonstration.

Second Speaker

Review points, mention in order. Give reasons for using Idaho foods.

Second Speaker

Clear table.
Show products.

Outline for Cookie Demonstration

Have dough prepared for pinwheel cookies.
For exhibit have three or four variations of basic recipe already prepared.

First Speaker

Prepare basic recipe.
Emphasize use of Idaho products being used. Mention using beet sugar and why. If lard or butter used, tell why.
Divide mixture into sufficient portions to make variety of cookies as planned.
Mention all cookies are better for being chilled thoroughly before baking.

Second Speaker

Get cookie tins ready.
Make sure oven heat is right.
Prepare mixture for spiced cookies.
Call attention to the fact that there are products such as spices, seasoning, that are not Idaho products, but every possibility of using more Idaho foods is emphasized.

First Speaker

Prepare and explain mixture of chocolate cookies.
Prepare raisin cookies.
Caution about too much flour in the dough or on the board.
Dough should be rolled out in small portions at a time.

Second Speaker

Explains spiced cookies mixture.
Takes prepared refrigerator dough from ice box and gets ready for oven.
Put cookies on pan and put in oven.
Mention in cutting cookies all trimmings should be used.

First Speaker

Review materials prepared, mention each one.
Crisp cookies should be stored separately or they will lose their crispness.

Second Speaker

Give other varieties that can be used and tell where and how to serve. Example: for teas, for lunch box, for meals at home, for after-the-game meals.

First Speaker

Summarize the demonstration.

Second Speaker

Watches oven and takes out cookies when finished.
Quietly arrange attractive exhibits and point out those being summarized by first speaker.

Both remove used utensils and close demonstration.

Suggested Outline for Meetings

FIRST MEETING

1. Song—selected.
2. Roll call.
3. Election of officers.
4. Leader explains work.
5. Select meeting place and time of regular meetings.
6. Club Pledge.
7. Start keeping record books.
8. Games.
9. Dismissal.

Home Work

Make muffins with variations; make two soup recipes for family; clean kitchen three times.

SECOND MEETING

1. Call to order. Roll call.
2. Song.
3. Reading of minutes.
4. Leader assigns demonstration team for next meeting.
5. Discuss points to consider in meal planning.
6. New business.
7. Games.
8. Dismissal.

Home Work

Prepare three different kinds of milk recipes during the week; prepare two different kinds of salads during the week; wash dishes four times; clean kitchen four times.

THIRD MEETING

1. Call to order.
2. Roll call.
3. Song—Idaho.
4. Reading of minutes.
5. Announcements by leader.
6. Demonstration.
7. Discussion.
8. Prepare Record Books.
9. Dismissal.

Home Work

Prepare meat for two meals; plan meal to go with these; record menu in Record Book.

FOURTH MEETING

1. Call to order.
2. Roll call.
3. Leader's announcements.

4. Demonstration: preparation of meat.
5. Discussion.
6. Select demonstration team.
7. Song
8. Reading of minutes.
9. New business.
10. Dismissal.

Home Work

Plan and prepare breakfast three times. Record menu.

FIFTH MEETING

1. Call to order.
2. Roll call.
3. Leader's announcements.
4. Demonstration: preparation of meat.
5. Discussion.
6. Make records in Record Book.
7. Leader appoints two girls to lead review at next meeting.
8. Reading of minutes.
9. Song.
10. Dismissal.

Home Work

Plan three meals, using meat; record in record books; prepare meat three times; wash dishes four times; clean kitchen twice.

SIXTH MEETING

(Review of previous work)

1. Call to order.
2. Roll call.
3. Song.
4. Review of points.
5. Food value of meat.
6. Need for protein.
7. Methods of cooking.
8. Use Lamb Chart and identify cuts from chart.
9. Announcement and selection of demonstration team.

Home Work

Plan and prepare three meals for family. Record menu and give reasons for choice.

SEVENTH MEETING

1. Call to order.
2. Roll call.
3. Song.
4. Demonstration.
5. Use Meat Chart for practice in identification of cuts.
6. Reading of minutes.

7. Prepare Record Books.
8. Announcements by leaders.
9. Plans for next meeting.
10. Dismissal.

Home Work

Prepare meat for meal once; plan, use, and prepare left-over meat for another meal; plan and record menu to go with both; consult meal guide; clean kitchen four times; plan and do entire work in food preparation for one day, including cleaning up kitchen.

EIGHTH MEETING

1. Call to order.
2. Roll call.
3. Demonstration: making bread.
4. Use Score Card and practice judging bread.
5. Discussion.
6. Announcements.
7. Games.
8. Dismissal.

Home Work

Prepare 1 day meal using beef; prepare 1 day meal using pork; prepare 1 day meal using lamb or poultry. Record menus in Record Book.

NINTH MEETING

1. Call to order.
2. Roll call.
3. Practice meat identification from charts.
4. Discussion of meat cookery.
5. Demonstration: rolls.
6. Demonstration: cake.
7. Luncheon.
8. Games, song.
9. Plans for Mother's Luncheon at next meeting.
10. Appoint Committees.
11. Dismissal.

Home Work

Prepare rolls twice and two variations; make cake with two variations; make bread once; plan menu to serve with these; record in book.

TENTH MEETING
(Mother's Luncheon)

1. Call to order.
2. Committees report.
3. Plan order of work, start preparations.
4. Serve meal, leave room in order.
5. Call to order.
6. Leader's announcements.
7. Plans for next meeting.
8. Dismissal.

Home Work

Make bread once with variations; study score card; make cake using variations; record results in Record Book; plan and prepare two meals during week.

ELEVENTH MEETING

1. Call to order.
2. Roll call.
3. Song.
4. Practice identifying lamb and beef from charts.
5. Bring Record Books up to date.
6. Make plans for Achievement Day.

Home Work

Practice making bread and judging it; study Meat Charts; plan and prepare two meals during the week. Complete Record Books.

TWELFTH MEETING

(Achievement Day)

1. Record Books completed.
2. Charts for fairs completed.
3. Judging demonstration.
4. Exhibit of work done in any project.

Reference Material*

Meat Charts
Vitamin Chart
Guide for Meal Planning
Suggested Weekly Plans for Minimum-Cost Diets
Lamb Is Always in Season
Apple Time in Idaho
Judging Score Cards
Table Service

* May be obtained from County Extension Agent.